Research Department
Federal Reserve
Bank of
San Francisco

August 7, 1981

Weekly Letter

Domestic Gloom and Foreign Optimism?

Some analysts have noted that domestic investors seem skeptical about the Reagan economic program, while foreign investors seem highly encouraged by it. For evidence of domestic pessimism, they point to the recent decline in bond prices (rise in long-term interest rates). For evidence of foreign optimism, they point to the strength of the dollar in the foreign-exchange markets—a surprising development when it is realized that the dollar was dramatically weaker in one earlier episode (1977-78) of rising long-term rates.

What reasons can we find for this surprising dichotomy? According to one view, domestic investors see the Administration's program as being inflationary—as leading to higher long-term interest rates. And at the same time, foreign investors look to the United States as a center of political and economic stability and, perhaps equally important, a respecter of property rights. Foreigners thus become increasingly attracted to the dollar in the wake of the political and military dislocations in the Middle East, the threat of a Soviet attack on Poland, and other events such as the recent French election.

Flaw in argument

This explanation for a simultaneously strong international dollar and weak domestic bond market is consistent with the evidence, and provides a reasonable explanation of recent developments. However, it does have one major flaw. One would expect a rise in U.S. inflation expectations (as in 1977-78) to be associated with both a *rise* in long-term bond rates and a *decline* in the international value of the dollar. After all, most analysts now recognize that a rise in inflation will depreciate the real purchasing power of dollar-denominated securities. Thus, a massive change in peoples' expectations of foreign risks and domestic stability would be required to overcome the depressing effects of rising inflation on the international value of the dollar.

At the logical level, the explanation is clearly *ad hoc*—an explanation which is unique to the circumstances at hand. But a more general explanation is available, based on the proposition that the variation in bond rates is primarily dependent on variations in long-run inflation expectations, while the foreign-exchange value of the dollar is primarily dependent on variations in real interest rates.

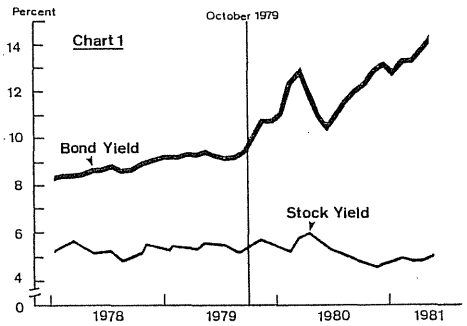
A bond investor purchases a fixed stream of income over the next twenty to thirty years. To evaluate the present value (and therefore the price) of that income stream, domestic bond-market participants make explicit calculations about what will happen to the domestic value of the dollar, i.e., the expected rate of inflation. But the foreign-exchange market, where the international value of the dollar is determined, does not respond to inflation expectations in the same way. The international investor in dollar securities will be compensated for a higher expected rate of inflation by a proportionately higher *nominal* interest rate, which will leave him indifferent to holding additional dollar assets.[1] However, the international investor will respond positively to a change in *real* interest rates. If real interest rates are higher in the United States than abroad, investors will try to buy more dollar assets, and in the process will raise the exchange value of the dollar. (See our *Weekly Letter* of September 12, 1980.)

Bond market and inflation

Most of the dramatic movement in bond yields in the last two years has been inflation-

[1] The exchange rate will adjust to actual inflation along the lines described in the theory of purchasing-power parity. The current discussion concerns the financial-market effects on the spot exchange rate, which operates through the real risk-adjusted interest rate.

Research Department
Federal Reserve Bank of San Francisco



related, as we can see (Chart 1) from comparing current stock and bond yields. (See our *Weekly Letter* of June 5, 1981.) The stock yield, because it need not incorporate an explicit inflation premium, is in effect a real rate of return. And the real returns on stocks and bonds, while certainly not identical, have historically moved together over the business cycle. Thus the unusual stability in the stock yield for the past four years provides strong, if indirect, evidence of the stability of the non-inflation component of the bond yield.

Inflation will affect the bond yield not only because of a rise in inflation expectations, but also because of a rise in inflation risk, which is related to the degree of uncertainty with which future inflation premiums are incorporated into the bond yield. If inflation expectations turn out to be too low (a common problem in the last ten years), then the investor runs the risk of suffering a loss on his bond investments. This risk is one-sided if inflation is less than expected and the bond can be "called" back by the corporation. Because high rates of inflation are associated with variable inflation, inflation premiums and inflation risks have tended to move together.

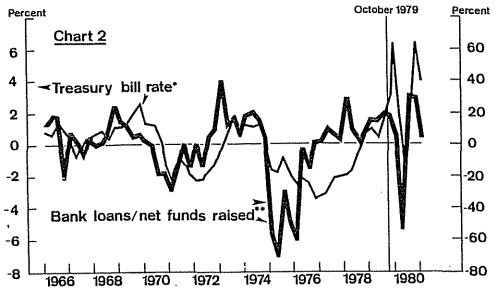
One can only speculate about the reasons for the major rise in inflation expectations and risk in the last two years. Certainly the actual rate of inflation has not risen dramatically—just the reverse. As measured by the consumer-price index, the inflation rate declined from 13.3 percent in 1979 to 12.4 percent in 1980, and then to an 8.5-percent annual rate in the first half of 1981. However, the inflation-induced rise in bond yields may reflect a perceived lack of Federal Reserve "credibility" with respect to achieving long-run money-growth targets. (See our *Weekly Letter* of June 5, 1981.)

Investors seem to forecast future inflation on the basis of what they expect to happen in the future growth of the money supply. If, over the past four years, investors had forecast the money supply and inflation on the basis of announced money targets, they would have been too low because the Federal Reserve overshot some of its targets in each of these years. But investors would have been about right if they had forecast money growth on the basis of growth in the national debt, because the two series have almost always moved together. Wall Streeters see the Reagan budget program as implying rapid growth in the national debt for the next four years, and so they forecast rapid growth in money and inflation. They are not convinced by the fact that the (M-1B) money supply has fallen below target so far this year, because it did the same in the comparable period of 1980 and yet overshot the top of its target range for the year as a whole.

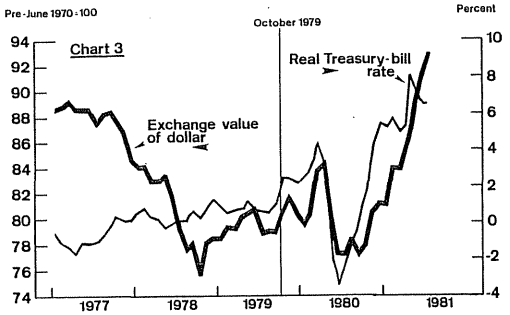
The recent rise in long-term bond yields may be more than proportional to the rise in inflation expectations, because bond purchasers face additional risks if their inflation forecast turns out to be too low. On the other side of the market, large corporate borrowers may be reluctant without a "call provision" to pay an interest rate which includes an inflation premium larger than the expected rate of inflation. Moreover, bond dealers may find the cost of holding inventories excessively risky, so that the bond market becomes thinner and more volatile in the wake of any reduction of inventories. Indeed, as a result of high bond rates and a thin bond market, many corporate borrowers have (at least temporarily) shifted to the short-term end of the market, especially to bank loans.

Bank loans and short-term rates

Over the last 15 years, bank loans have averaged 22 percent of total funds raised by corporations. However, the proportion has varied considerably over time, because many corporations consider banks as their residual source of funds. Yet unlike other suppliers of shorter-term funds, banks have the unique ability to increase the money supply because they increase deposits, at least temporarily, as they service loans. This factor has had



*Detrended 3-month bill rate
**Ratio, deviation from mean



different consequences before and after the October 1979 shift in Federal Reserve operating procedures (see chart 2).

Prior to October 1979, the Federal Reserve tried to keep the Fed funds rate within a narrow target range, so that an unexpected increase in bank loans, deposits and the money supply would be accommodated by an increase in bank reserves. This accommodation meant that short-term interest rates could not respond quickly to changes in bank loans. However, the resulting increase in money would eventually stimulate the economy, and raise interest rates after a year or so.

After October 1979, the Fed has focused instead on short-run control of bank reserves, so that an increase in bank loans and deposits would not be accommodated to the same extent as before by an increase in bank reserves. Interest rates thus have moved immediately to equate the supply and demand for bank loans, with the size of that response depending upon the strength of corporate preference to meet their short-run needs from banks. If corporations see substantial advantages to the use of bank loans, then a relatively large increase in rates will be needed to discourage them from borrowing. Consequently, Federal Reserve attempts to control money via bank reserves will lead to a rather sharp movement in short-term rates when corporations decide (for whatever reason) to increase the share of funds raised in the form of bank loans.

Exchange rates and interest rates

A rise in the *real* interest rate, and not in the *nominal* interest rate, affects the exchange value of the dollar (see the *Weekly Letter* of September 12, 1980). Only a rise in real interest rates induces foreigners to purchase more dollar-denominated assets.

If the rise in rates is due to inflation expectations, there is no higher real rate of return for buying dollar assets, and therefore no capital inflow to affect exchange rates. Since October 1979, much of the movement in the dollar's exchange value can be explained by the unusual variation in U.S. real short-term interest rates (see Chart 3).

Summary: policy dilemma

In summary, four factors help explain the phenomenon of a weak bond market and a strong dollar. First, long-run inflation expectations are not based on Federal Reserve money-supply targets, but rather on an expected growth rate of the national debt. Second, market participants widely expect that the national debt will increase, leading to future increases in the money supply. The resulting rise in long-run inflation expectations and inflation risks reduces the viability of the bond market as a source of long-term funds, and increases the share of funds raised in the form of bank loans. Third, banks provide a unique link between credit and money markets, because an increase in bank loans induces increases in deposits and the money supply. The Fed must resist this credit-induced increase in money if it is to stay within its long-run money targets. Fourth, the resulting rise in real short-term interest rates leads to a temporary rise in the value of the dollar in the foreign-exchange market.

When will interest rates come down? The pressure will be relieved when the market begins to forecast money growth and inflation on the basis of the Fed's targets, or alternatively when the market sees a reduction in the size of the government deficit. That eventuality would reduce inflation expectations, and would revive the bond market as a viable source of long-term financing. The resulting reduction in corporate demand for bank loans would then make it possible for the Fed to hit its money-supply targets without involving such high short-term interest rates.

Michael W. Keran

Federal Reserve Bank of San Francisco Weekly Letter

FIRST CLASS

Research Department
Federal Reserve
Bank of
San Francisco

Alaska • Arizona • California • Hawaii
Idaho • Nevada • Oregon • Utah • Washington

FIRST CLASS MAIL
U.S. POSTAGE
PAID
PERMIT NO. 752
San Francisco, Calif.

BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 7/22/81	Change from 7/15/81	Change from year ago Dollar	Change from year ago Percent
Loans (gross, adjusted) and investments*	150,270	82	12,612	9.2
Loans (gross, adjusted) — total#	129,166	82	13,234	11.4
Commercial and industrial	38,948	305	5,574	16.7
Real estate	53,264	134	6,133	13.0
Loans to individuals	22,948	9	− 873	− 3.7
Securities loans	1,391	− 188	391	39.1
U.S. Treasury securities*	6,208	18	− 106	− 1.7
Other securities*	14,896	− 18	− 512	− 3.3
Demand deposits — total#	39,055	−4,141	− 3,437	− 8.1
Demand deposits — adjusted	27,762	−2,113	− 3,520	−11.3
Savings deposits — total	30,258	− 69	1,220	4.2
Time deposits — total#	82,968	155	20,856	33.6
Individuals, part. & corp.	74,713	138	20,922	38.9
(Large negotiable CD's)	33,481	− 344	11,188	50.2
Weekly Averages of Daily Figures	Week ended 7/22/81	Week ended 7/15/81	Comparable year-ago period	
Member Bank Reserve Position				
Excess Reserves (+)/Deficiency (−)	n.a.	n.a.	− 50	
Borrowings	80	72	30	
Net free reserves (+)/Net borrowed(−)	n.a.	n.a.	− 80	

* Excludes trading account securities.
\# Includes items not shown separately.

Editorial comments may be addressed to the editor (William Burke) or to the author . . . . Free copies of this and other Federal Reserve publications can be obtained by calling or writing the Public Information Section, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco 94120. Phone (415) 544-2184.